

Appl No.: 10/623,227
Reply to Office Action of Aug 14, 2006

Atty. Dkt. No:
UCI-273DIV

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 36 (Canceled).

Claim 37 (Currently Amended). Carbon particles having surface filaments formed during the thermocatalytic decomposition of hydrocarbon fuel comprising in combination:

an approximately one micron diameter in average and from at least one to two orders of magnitude thicker than conventionally produced carbon nanofibers;

an a hydrophobic, "octopus"-like structure, with a portion of the structure being substantially hollow, and each filament being substantially of longitudinal uniformity and of graphitic structure.

Claim 38 (Original). The carbon particles of claim 37, having a property of oil film adsorption from a surface of water.

Claim 39 (Currently Amended). The method of producing carbon particles having surface filaments of about one micron mean diameter, an "octopus"-like structure with a hollow portion, and longitudinal uniformity, of graphitic structure, comprising the steps of:

a) passing electrical current through carbon-based catalytic material and heating it to about 850°C to about 1200°C;

b) passing a stream of hydrocarbon fuel through said the carbon-based catalytic material with production of hydrogen-rich gas and carbon with filamentary surface deposited on the surface of said the catalytic material; and

c) recovering carbon particles with a filamentary surface.

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Claim 40 (Currently Amended). The method of Claim 39 wherein said the carbon-based catalytic material is carbon black and heating is to approximately 1000 °C.

Claims 41 - 43 (Canceled).